WE CLAIM:

1. A multi-component fiber, comprising at least first and second segments, the first and second segments being made respectively of a first polymer material and a second polymer material different from the first polymer material, the first polymer material having a higher melt temperature than that of the second polymer material, a difference in melt temperature between the first and second polymer materials being at least 100°C, the first and second segments being splittable from each other.

2. The multi-component fiber according to claim 1, having a size in the range of 0.7 to 100 deniers per filament.

3. The multi-component fiber according to claim 1, wherein the fiber is a microfiber.

4. The multi-component fiber according to claim 1, wherein the fiber has a plurality of the first segments and a plurality of the second segments, and wherein the fiber has between 4 and 100 segments in total.

5. The multi-component fiber according to claim 1, wherein the first polymer material is selected from the group consisting of polyethylene terephthalate, polylactic acid, poly-cyclohexylene dimethylene terephthalate, and polyamides, and the second polymer material is selected from the group

consisting of high density polyethylene, linear low density polyethylene, polypropylene, polylactic acid, copolymers of polyethylene terephthalate and polyamides, the first and second polymer materials being selected such that the melt temperature of the first polymer material is higher than that of the second polymer material.

6. The multi-component fiber according to claim 1, wherein the melt temperature of the first polymer material is in a range of 125°C-450°C, and the melt temperature of the second polymer material is in a range of 60°C-300°C.

7. The multi-component fiber according to claim 6, wherein the first and second segments are splittable from each other by at least one of heat and mechanical action.

8. The multi-component fiber according to claim 1, wherein the first and second segments are splittable from each other by at least one of heat and mechanical action.

9. Fiber-containing material made from a plurality of multi-component fibers, each multi-component fiber including at least first and second segments, the first and second segments being made respectively of a first polymer material and a second polymer material different from the first polymer material, the first polymer material having a higher melt temperature than that of the second polymer material, the first and second segments being at least partially split from

each other, the second segments having been melted and being a binder of the fiber-containing material.

10. Fiber-containing material according to claim 9, wherein the material is a yarn.

11. Fiber-containing material according to claim 9, wherein the material is a non-woven fabric.

12. Fiber-containing material according to claim 11, wherein the fabric has a weight of 0.3 to 40 ounces per square yard.

13. Fiber-containing material according to claim 9, wherein the second segments have been completely melted in forming the material.

14. Fiber-containing material according to claim 9, wherein the second polymer material, forming the second segments, is the sole binder of the fiber-containing material.

15. Fiber-containing material according to claim 9, wherein the fibers are microfibers.

16. Fiber-containing material according to claim 9, wherein a difference between the melt temperature of the first polymer material and the melt temperature of the second polymer material is at least 100°C.

17. Fiber-containing material according to claim 9, wherein the first polymer material has a melt temperature in a range of 125°-450°C, and the second polymer material has a melt temperature of 60°-300°C.

18. Fiber-containing material according to claim 9, wherein the second segments have been only partially split from the first segments.

19. Fiber-containing material according to claim 18, wherein the first and second segments are segments that have been split due to differential shrinkage thereof, the segments being self-bulking due to the differential shrinkage.

Sub A4 ~~20. Fiber-containing material according to claim 9, wherein the second segments are completely split from the first segments.~~

21. Fiber-containing material according to claim 9, wherein the fibers are staple fibers.

~~22. Fiber-containing material according to claim 9, wherein the material has cross-over points of the first segments, where the first segments cross each other, and wherein the second polymer material, of the second segments, is concentrated at the cross-over points.~~

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23. Fiber-containing material according to claim 22, wherein the second polymer material, of the second segments, is substantially only at the cross-over points.

24. Fiber-containing material according to claim 9, wherein the material is selected from the group consisting of a hydroentangled fabric, a spunbonded fabric, a wet-laid fabric, an air-laid nonwoven web, a needlepunched nonwoven web and a card web.

25. A filter comprising the fiber-containing material of claim 9.

26. A wiping cloth comprising the fiber-containing material of claim 9.

27. Synthetic leather comprising the fiber-containing material of claim 9.

28. Synthetic suede comprising the fiber-containing material of claim 9.

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29. Fiber-containing material according to claim 9, wherein the first polymer material is selected from the group consisting of polyethylene terephthalate, polylactic acid, poly-cyclohexylene dimethylene terephthalate, and polyamides, and the second polymer material is selected from the group consisting of high density polyethylene, linear low density

polyethylene, polypropylene, polylactic acid, copolymers of polyethylene terephthalate and polyamides, the first and second polymer materials being selected such that the melt temperature of the first polymer material is higher than that of the second polymer material.

30. Fiber-containing material made from a plurality of multi-component fibers, each multi-component fiber including at least first and second segments, the first and second segments being made respectively of a first polymer material and a second polymer material different from the first polymer material, the first polymer material having a higher melt temperature than that of the second polymer material, the first segments of the plurality of multi-component fibers having cross-over points with each other, and wherein second polymer material, of the second segments, is concentrated at the cross-over points to act as a binder of the fiber-containing material.

31. Fiber-containing material according to claim 30, wherein the second polymer material, of the second segments, is located substantially only at the cross-over points.

32. A method of forming a fiber-containing material, comprising the steps of:

collecting a plurality of multi-component fibers, the multi-component fibers having at least first segments and second segments respectively made of first and second polymer

materials different from each other, the first polymer material having a higher melt temperature than that of the second polymer material;

splitting the second segments at least partially from the first segments; and

thermally bonding the fibers, to form the fiber-containing material, by melting the second polymer material of the second segments.

33. The method according to claim 32, wherein in thermally bonding the fibers, the second polymer material of the second segments is completely melted.

34. The method according to claim 32, wherein in the step of splitting the second segments from the first segments, the second segments are only partially split from the first segments.

35. The method according to claim 32, wherein in the step of splitting, the second segments are completely split from the first segments.

36. The method according to claim 32, wherein in the collecting step the plurality of multi-component fibers are collected into a yarn.

37. The method according to claim 32, wherein in the collecting step the plurality of multi-component fibers are

deposited on a collecting surface so as to form a nonwoven web.

38. The method according to claim 32, wherein the multi-component fibers are staple fibers.

39. The method according to claim 32, wherein the first and second segments are split by applying heat thereto.

40. The method according to claim 39, wherein in the step of splitting the second segments from the first segments, the second segments are only partially split from the first segments.

41. The method according to claim 40, wherein the first and second segments are subject to differential shrinkage upon application of heat, the fibers being self-bulking due to the differential shrinkage.

42. The method according to claim 32, wherein in the collecting step the plurality of multi-component fibers are collected on a collecting surface and bonded so as to form a nonwoven fabric.

43. The method according to claim 32, wherein the multi-component fibers are microfibers.

44. The method according to claim 32, wherein the multi-component fibers each contains 4-100 segments and is in a range of 0.7-100 deniers per filament, and after splitting the segments are in a range of 0.01-20 deniers per filament.

45. The method according to claim 32, wherein a difference in melt temperature between the first and second segments is at least 100°C.

46. The method according to claim 32, wherein the melt temperature of the first segments is in a range of 125°-450°C, and the melt temperature of the second segments is in a range of 60°-300°C, the difference in melt temperature between the first and second segments being in a range of 10°-250°C.

47. The method according to claim 32, wherein in the collecting step, the plurality of multi-component fibers form cross-over points with each other, and in the thermal bonding step the second polymer material of the second segments is melted so as to encapsulate the first segments at the cross-over points.

48. The method according to claim 47, wherein in the thermal bonding step the second polymer material of the second segments is melted such that after the thermal bonding the second polymer material of the second segments is substantially only at the cross-over points.

49. The method according to claim 32, wherein in the thermal bonding the second polymer material of the second segments is melted without melting the first polymer material of the first segments.

50. The method according to claim 32, wherein the splitting is performed by applying jets of fluid to split the first and second segments apart.

51. The method according to claim 32, wherein the splitting is performed by subjecting the multi-component fibers to mechanical action.

52. The method according to claim 32, wherein in the thermal bonding step the second polymer material of the second segments is the only bonding agent for the fiber-containing material.

53. The method according to claim 32, wherein the collecting is performed prior to the splitting.

54. The method according to claim 32, wherein the splitting is performed prior to the collecting.

55. Product formed by the method of claim 52.

56. Product formed by the method of claim 49.

57. Product formed by the method of claim 48.

58. Product formed by the method of claim 44.

59. Product formed by the method of claim 38.

60. Product formed by the method of claim 32.